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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,797	06/09/2000	Phillips D. Rockwell	ROC0001U	1721

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EXAMINER

LAM, THANH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/590,797

Applicant(s)
Rockwell

Examiner
Thanh Lam

Art Unit
2834



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amndt. filed on 4/16/2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4,13-16,21, and 28-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Snyder (pn. 5,160,393).

Snyder discloses a vibrator apparatus comprising: a base; an armature plate resiliently mounted to said base; an armature of magnetically attracted material mounted to said armature (col. 4, lines 19-21) plate; a first electromagnet (44) mounted to said base in a spaced apart relationship to said armature; a second electromagnet (46) mounted to said base in a spaced apart relationship to said armature; and a circuit for generating electrical pulses having a first output connected to said first electromagnet and a second output connected to said second electromagnet, said circuit configured for selectively operating the vibration generator in a circular orbital vibratory mode, an elliptical vibratory mode (col. 1, lines 19-26) and a reciprocating vibratory mode (see Abstract line 7).

Regarding claim 2, wherein said circuit is configured to deliver electrical pulses to said first electromagnet and said second electromagnet at a variable frequency.

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Regarding claim 3, wherein said circuit is configured to deliver electrical pulses to said first electromagnet and said second electromagnet at a variable phase angle.

Regarding claim 4, wherein said circuit is configured to deliver electrical pulses to said first electromagnet and said second electromagnet with a variable duty cycle.

Regarding claim 12, wherein said circuit comprises a source of electrical pulses at a source frequency and a frequency divider for reducing the source frequency to a desired operating frequency and a pulse counter for selectively delivering the electrical pulses to said first electromagnet and said second electromagnet at a selected phase angle.

Regarding claims 13, 27 and 31, wherein said circuit comprises a mode selector switch for selectively operating the vibration generator in a circular orbital vibratory mode, an elliptical vibratory mode and a reciprocating vibratory mode (fig. 11 of mode selector switch).

Regarding claim 14, wherein said armature comprises a first armature bar and a second armature bar, said first electromagnet being mounted in a spaced apart relationship to said first armature bar, and said second electromagnet being mounted in a spaced apart relationship to said second armature bar.

Regarding claim 15, wherein said first electromagnet is mounted at approximately a right angle to said second electromagnet.

Regarding claim 16, wherein said armature plate is resiliently mounted to said base by a multiplicity of flexural spring elements.

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Regarding claim 21, wherein said armature plate is resiliently mounted to said base by an adjustable rate spring element.

Regarding claim 22, Synder discloses a vibrator apparatus comprising: a base; an armature plate resiliently mounted to said base; an armature (col. 4, 21-23) of magnetically attracted material mounted to said armature plate; a plurality of electromagnets, including a first electromagnet (46) and a second electromagnet (48), said first electromagnet mounted to said base in a spaced apart relationship to said armature, and said second electromagnet mounted to said base in a spaced apart relationship to said armature; and a source of alternating current configured to deliver alternating current to said first electromagnet at a first amplitude (first phase with a pulse) and to said second electromagnet at a second amplitude (second phase with a second pulse), thereby inducing an elliptical motion in said armature.

Regarding claim 29, further comprising means for varying said first amplitude and said second amplitude.

Regarding claim 30, wherein said source of alternating current is configured to deliver alternating current to said first electromagnet at a variable phase angle with respect to said second electromagnet.

Regarding claim 32, said phase shifting circuit is configured to deliver electrical pulses to said first electromagnet and said second electromagnet at a variable phase shift angle.

Regarding claim 33, Synder discloses a vibrator apparatus comprising: a base; an armature plate resiliently mounted to said base; an armature of magnetically attracted material

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mounted to said armature plate; a first electromagnet (46) mounted to said base in a spaced apart relationship to said armature; a second electromagnet (48) mounted to said base in a spaced apart relationship to said armature; and a circuit for generating electrical pulses having a first output connected to said first electromagnet and a second output connected to said second electromagnet, said circuit configured to deliver electrical pulses to said second electromagnet at a variable phase angle (96) with respect to said first electromagnet, thereby inducing an orbital motion in said armature (fig. 8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 5-11,17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Synder .

Regarding claims 5-11, Synder discloses every aspect of claimed invention except for the circuit is configured for connection to a source of alternating current and wherein said circuit comprises a frequency doubler for doubling a frequency of the alternating current a frequency

Synder discloses the circuit for controlling /adjusting frequencies of the AC power source (fig. 8). Therefore; It would have been obvious to one of ordinary skill in the art at the time the

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invention was made to adjust the frequencies of the circuit of Synder to a double frequency or a divided frequency or a reducing frequency to accommodate a desired operating frequency.

Regarding claims 17-20, Synder discloses every aspect of claimed invention except for the flexural spring elements or the elements constructed of spring steel or the elements are approximately round in cross section. It would have been an obvious matter of design choice to make the elements with steel or changing the shape of the elements in round shape, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Response to Arguments

5. Applicant's arguments with respect to claims 1-33 filed 4/16/2002 have been fully considered but they are not persuasive as set forth in the details rejection above.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (703) 308-7626. The fax phone number for this Group is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0656.



Thanh Lam

June 4, 2002



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